IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Alexandre Blais

Application No.:

10/626,464

Group No.:

1617

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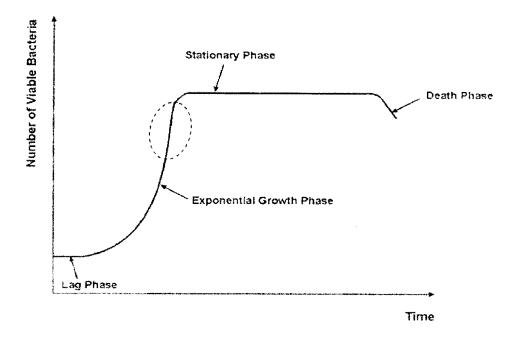
701826-054280

A NEW FERTILIZER AND METHOD FOR PRODUCING SAME

DECLARATION UNDER 37 C.F.R. SEC. 1.132

- I, Alexandre Blais, do hereby declare and state as follows:
- 1. I received the Doctor of Philosophy (Ph.D.) degree of Microbiology and from Laval University in 1975.
- 2. I was employed by Agropur as a researcher and then as a research manager until 1980.
- 3. In 1990, I was employed by Natrel as a research director in the fluid milk sector. I was involved in uncloupling mechanisms involved in psychrophilic bacteria and the heat resistance of their enzyme.
- 4. In 1993, I developed my own private consultant office. I worked specifically on energy meal substitutes, on soy bean milk flavour to reduce beany flavour, on the degradation of biologic pollutant with biodigester, bio-tour treatment, phosphate catabolism in water treatment. In addition, I also investigated development of fat treatment in water and identifying bacteria that can attack each type of carbon compound and more specifically those having high ratio of DCO/DBO5 and those with a low ratio coming from municipality or agri-food plant.
- 5. Since 1996, I work for a Canadian government agency involved in research and development.

- 6. I am the inventor in the present application; I have read and am thoroughly familiar with the contents of U.S. Patent Application Serial No. 10/626,464 entitled "A NEW FERTILIZER AND METHOD FOR PRODUCING SAME", including the claims.
- I have also read and understood the latest Official Action from the PTO dated September 7, 2007. In this Office Action, claims 1-21 were rejected under 35 U.S.C. §103(a) for allegedly being obvious.
- In addition, I have also read and understood the Advisory Action issued on January 16, 2008.
- 9. Firstly, it is submitted that the 10/626,464 application is teaching and claiming a fertilizer wherein the bacteria are active immediately, i.e. readily available and without a lag time. The present application teaches, and claims a method of producing a fertilizer comprising the step of mixing a granular fertilizer with a ferment comprising active bacteria, wherein bacteria are obtained form a fermentation stopped before bacteria get into a dormant stage, which will prevent the bacteria to have a lag time upon re-hydration. Thus, if one look at the growth curve of bacteria as illustrated hereinbelow, the fermentation and dehydration of the bacteria used in the 10/626,464 application occurs just before the stationary phase (see dash circle in the illustration).



- 10. Further, the fertilizer produced by the method described in the 10/626,464 application is used at a rate of at most 3 liters of ferment per ton of fertilizer. Spraying the fertilizer at a higher rate will cause the fertilizer to partly solubilize, liberating nitrogen concentrated at the surface of the fertilizer, in the vicinity of the bacteria, which is toxic to the bacteria in such concentrated microenvironment. When the fertilizer of the present invention is used at a rate of more then 3 liters of ferment per tone of fertilizer, the fertilizer agglomerate. Dehydration of the fertilizer disclosed in the present application allows not only to prevent agglomeration at a lower volume of use but also to prevent cellular damage caused to the bacteria by nitrogen solubilized from the hydrated fertilizer.
- 11. I have read the reference of Burnham (US patent No. 6,841,515) and believe that not only is Burnham teaching granules having water (thus bacteria that have not been dehydrated; see column 8 in Burnham), but nowhere in Burnham is there

- any teaching or even suggestion of stopping fermentation of bacteria and dehydration of the bacteria just before the stationary phase.
- 12. Further, the fertilizer described produced by the method described in the 10/626,464 application is not encapsulated and/or concentrically-constructed. In the Advisory action, the examiner is implying that the biosolids disclosed in Burnham may not be encapsulated. However, in order to 1) limit the exposure and activation of active substances in the biosolids during storage, and 2) to control the biosolids disintegration during use, the biosolids need to be encapsulated and/or concentrically-constructed. Consequently, I believe that from the teaching found in Burnham, only encapsulated and/or concentrically-constructed biosolids are possible.
- 13. Still, the fertilizer disclosed in the 10/626,464 application has a great commercial success since collaborative and commercialization agreement were signed in Canada and Vietnam. 150 000 tons of fertilizer have been produced and sold already in 2008, and 350 000 tons more are projected to be sold in the following months.
- 14. In conclusion, the 10/626,464 application is teaching and claiming a method of producing a fertilizer having unique properties and showing great commercial promises.
- 15. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by a fine or imprisonment, or both (18 U.S.C.

Sec. 1001), and may jeopardize the validity of the application of any patent issuing thereon.

Signed & Alexandre Blais
Alexandre Blais

Dated: March 6, 2008